STARTRITE

Woodworking Bandsaws

Instruction Manual

301SB

351SB

A.L.T. SAWS AND SPARES LTD
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Gillingham
Kent, ME7 1RZ
www.altsawsandspares.co.uk
01634 850833

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QUALITY BANDSAW BLADES

TO SUIT THE 301/351SB MODEL

ORDER LINE- 01634 850833

A.L.T. SAWS & SPARES LTD

Unit 15, Pier Road Industrial Estate

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ME7 1RZ

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Index

1 GENERAL INFORMATION
1.1 Foreword
1.2 Warranty

2 MACHINE DESCRIPTION
2.1 Machine identification
2.2 Technical characteristics
2.3 CE Certificate
2.4 Safety protection
2.5 Noise emission
2.6 Prescribed use of the machine
2.7 Hazards
2.8 Wiring diagram for single phase electrical motor
2.9 Wiring diagram for three phase electrical motor

3 INSTALLATION
3.1 Hoisting and unloading
3.2 Mounting the machine on base
3.3 Connecting the aspiration system

4 ADJUSTMENTS
4.0 Principal machine groups
4.1 Mounting and tracking the blade
4.2 Blade tensioning
4.3 Setting of the blade-guides
4.4 Table tilt
4.5 Accurate adjustment of the rip fence and scale

5 USE

6 ADVICE AND RECOMMENDATION FOR SAFETY
6.1 Safety devices and guards
6.2 Face cutting & cutting of short pieces
6.3 Cutting of round pieces
6.4 Wedge cutting
6.5 Circular cutting
6.6 Cutting of wedge-shaped lengths

7 MAINTENANCE
7.1 Troubles-causes and solutions
7.2 Recommended blades
7.3 Brake regulation

8 SPARE PARTS
8.1 Ordering spare parts
8.2 Main components list

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1 General Information

1.1 FOREWORD

It is advisable to read this manual carefully before starting-up the machine.
This will permit a better working knowledge of the machine, obtain the best results and maximum quality of work.

1.2 WARRANTY

The warranty period is 12 months from date of purchase and covers all defective parts and includes labour where necessary.
Proof of purchase date will be required when making a claim.

The guarantee does not cover:
- Accidental damage
- Damage caused by incorrect installation or incorrect electrical connection.
- Damage caused by negligence misuse or repairs by an unauthorised person.

The guarantee is valid for 12 months from the date of purchase of the machine.

2 Machine Description

2.1 MACHINE IDENTIFICATION

There is a metal identification plate fixed to the machine, containing the manufacturer's data, year of construction, serial number and blade data.

2.2 TECHNICAL CHARACTERISTICS

301SB		351SB	
Bandwheels Dia.	300mm	Bandwheels Dia.	350mm
Blade Speed	1020m/min	Blade Speed	1020m/min
Motor Power	1hp	Motor Power	1hp
Height Under Guides	160mm	Height Under Guides	250mm
Max Cutting Width	350mm	Max Cutting Width	350mm
Table Size	375x375mm	Table Size	375x375mm
Table Tilt	0-20°mm	Table Tilt	0-20°mm
Blade Length	2905mm	Blade Length	2710mm
Blade Width	3 - 25mm	Blade Width	3 - 25mm
Weight	100kg	Weight	105kg

Equipment supplied:
- Machine base
- Service key
- Instruction manual
- Blade
- Rip fence

2.3 CE CERTIFICATE

CE certificate of the agreed type for model STAR 360
with the n° 0476 40 242 04 82
issued by: CERMET Soc.Cons.a.r.l via A.Moro 22
40068 S.LAZZARO DI SAVENA (BO).

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2.4 ADVISABLE SAFETY PROTECTION FOR PERSONNEL

- Gloves for moving work material and when carrying out the blade changes;
- None-slip shoes;
- Protective eye glasses.

2.5 NOISE EMISSION

The measurements of noise, in the working position and during operation, were carried out under the standard ISO 7960 annex "J":

Acoustic pressure level	76.8 dB
Acoustic power level	90.0 dB
Instantaneous acoustic pressure	<130.0 dB

The values of the noise levels indicated are emission levels and don't necessarily represent safe working levels.
Although there is a relationship between emission levels and exposure levels, it isn't precise enough to use in a way to determine whether it is necessary or not, to implement further precautions. The factors that determine the true exposure level to operators are: the amount of exposure time, the characteristics of the working environment, other sources of dust and noise etc.
The permitted exposure level limits vary from country to country. This information allows the machine user to better evaluate the dangers and risks.

2.6 PRESCRIBED USE OF THE MACHINE

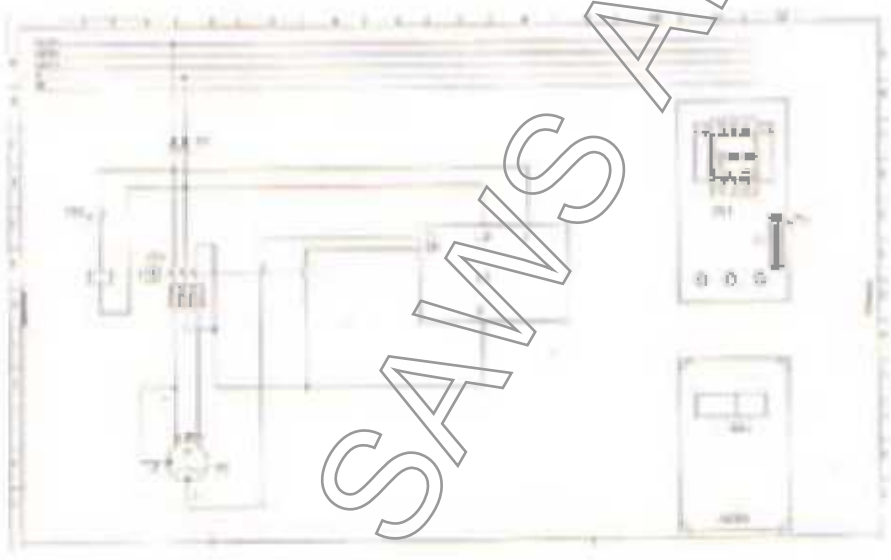
The machine was designed for cutting solid wood, wood derivates, materials similar to cork, hard rubber and hard plastic materials using suitable blades.

It is expresely forbidden to cut other materials,
THIS MACHINE WILL NOT CUT METALS

2.7 HAZARDS

ATTENTION Bandsaws still present risks that cannot be eliminated by the manufacturer. Therefore the user must be aware that wood working machines are dangerous if not used with care and all safety precautions advised to.
We recommend you to study the information given in HSE document: "Safety in the use of narrow bandsaws"

2.8 WIRING DIAGRAM OF SINGLE PHASE ELECTRICAL MOTOR



ID	DESCRIPTION
X1	general plug
QB1	magnetothermic motor saver
U1	brake board
QB1	min tension coil
QS1	auxiliary links
SQ1	safety microswitch for access panels box

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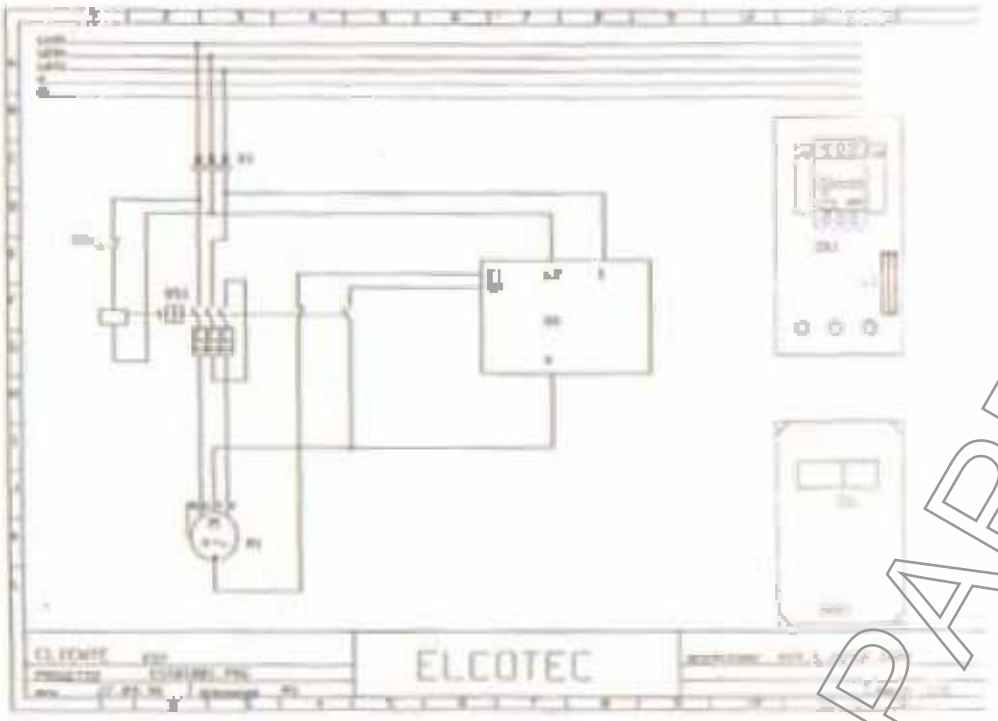
2.9 WIRING DIAGRAM OF THREE PHASE ELECTRICAL MOTOR



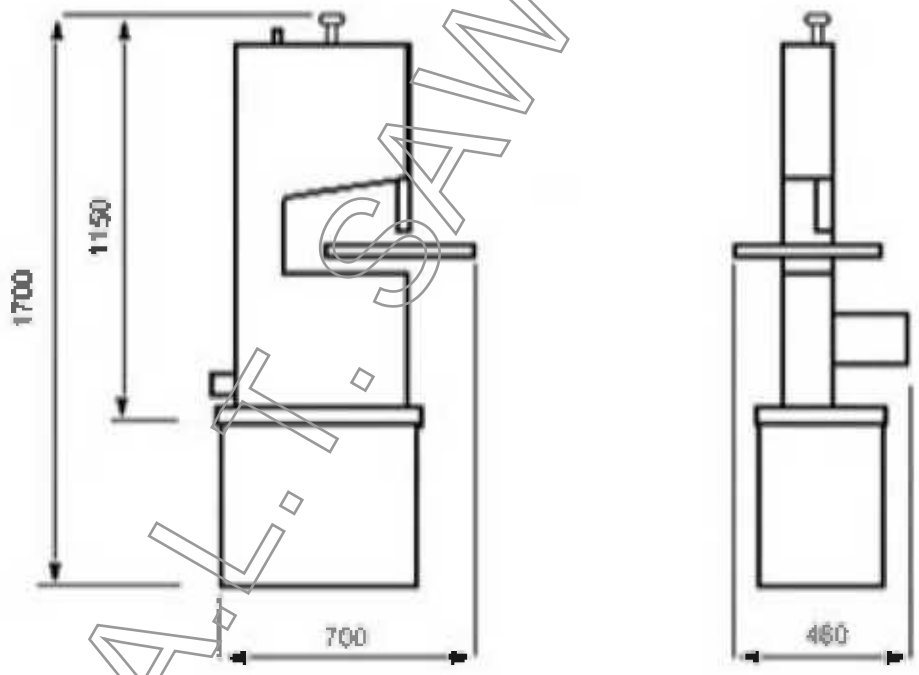
ID	DESCRIPTION
XI	general plug
QS1	magnetothermic motor saver
US	power board
QS1	min. tension coil
KS1	auxiliary links
SQ1	safety micro-switch for access panels
	box

3 Installation

3.1 HOISTING AND UNLOADING

The machine can be lifted by two persons using the column and the under neath of the table, also by using suitable lifting equipment for the weight (80 kg) and dimensions.

Dimensions



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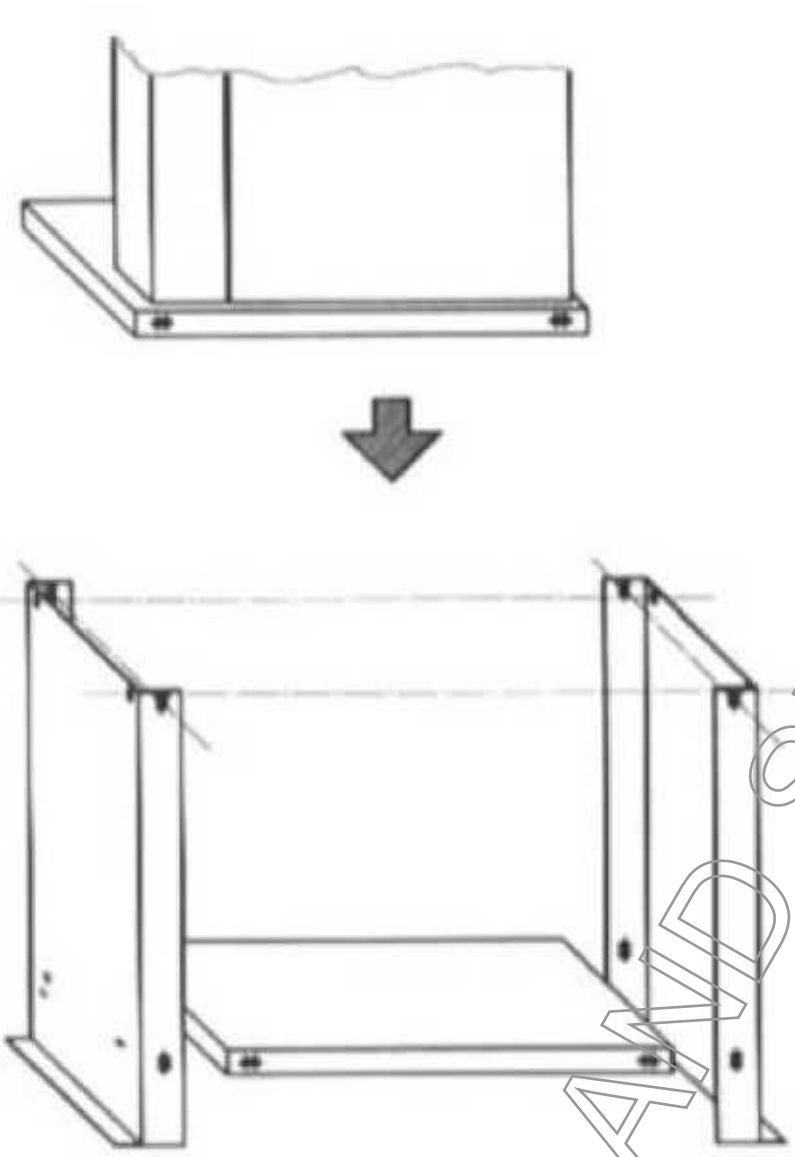
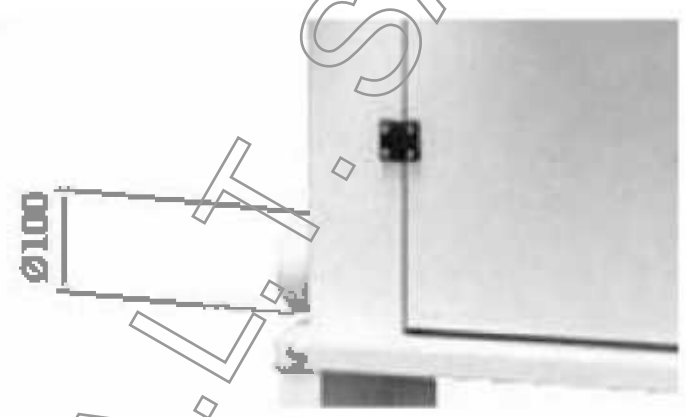
3.2 BASE MOUNTING



3.3 CONNECTING THE ASPIRATION SYSTEM

The machine should always be used with an adequate dust extractor.
The connection must be made using a tube with an internal diameter of 100 mm. an air speed of 20 mt/sec the volume of air required is approx. 500 mt3/h.
If the material is damp then the air speed should be increased up to 28 mt/sec, with a volume of air required of approx. 800 mt3/h.



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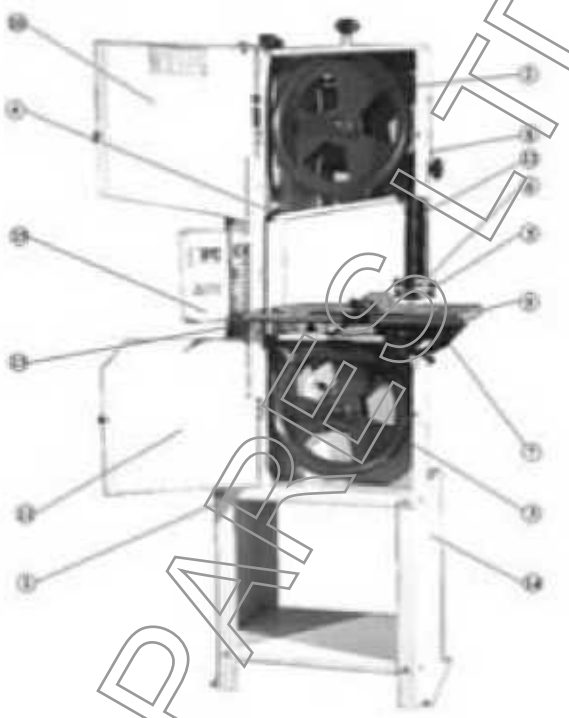
4 Adjustments



4.0 PRINCIPAL MACHINE GROUPS

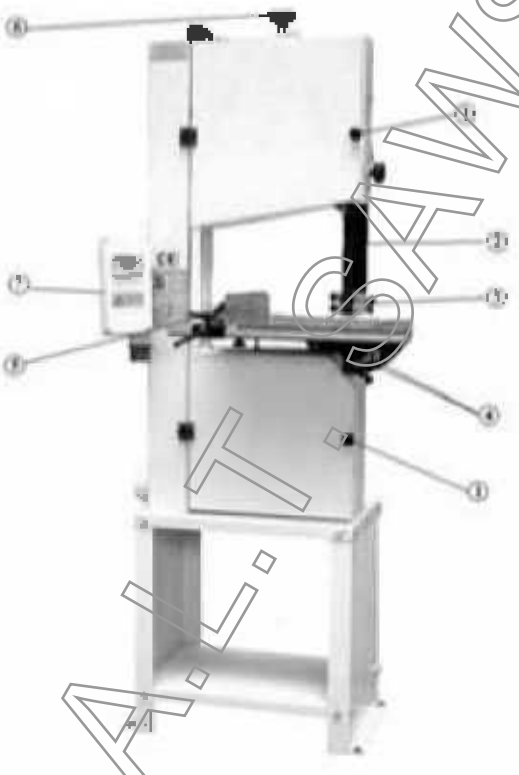
1 Floor stand
2 Upper flywheel
3 Lower flywheel
4 The rising part of the blade
5 The descending part of the blade
6 Upper blade-guide
7 Lower blade guide
8 Blade-guide height regulation
9 Work table
10 Upper access panel
11 Lower access panel
12 Blade protection
13 Guide
14 Base
15 Control box

ATTENTION!! REMOVE THE ELECTRICAL PLUG BEFORE EVERY ADJUSTMENTS

ATTENTION!! IN CASES OF BLADE BREAKAGE WAIT UNTIL THE UPPER FLYWHEEL HAS COMPLETELY STOPPED BEFORE OPENING THE ACCESS PANEL

4.1 MOUNTING AND REGULATING THE BLADE

To remove the blade open the access panel, after underscrewing the knob (ref. 1).
Adjust the guard/guide (ref. 2) to mid-height...
Loosen the knob (ref. 4) and swing the guide bar out of the way (ref.5)
Slacken the flywheel tension (ref. 6) until the blade is loose enough to be removed.
Place and position the new blade on the flywheel, tighten the tension (see para. 4.2), turning the flywheel by hand.
Replace the guide (ref. 5) and close the access panel.
When replacing a blade is not necessary to remove any guards.
The guide setting must be changed when a narrower or wider blade to the one in use is fitted.



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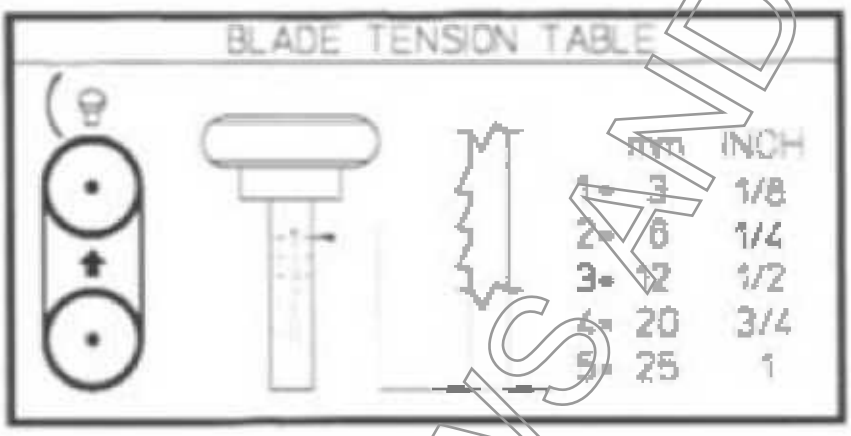
4.2 TENSIONING THE BLADE

Using the knob (in the picture below) tighten the blade.
The tension value is indicated on the graduated scale situated under the knob. The indicated number corresponds to the width of the blade fitted. Eg. For a blade width of 12mm tighten until the line corresponding to the number 3 is in line with the indicating arrow.
Rotate freely the flywheels, by hand, and adjust the position of the blade on the flywheels. To do this unlock and turn the knob behind the machine, clockwise, to make the blade move inwards and anti-clockwise to move the blade outwards.
After some time it is possible that the tension will be insufficient, this means that the spring is not longer effective and needs to be replaced.

IMPORTANT NOTE.
AFTER USE IT IS RECOMMENDED TO SLACKEN THE BLADE TENSION AND DISPLAY A VISIBLE NOTICE ADVISING OF THIS PROCEDURE.

View of the tensioning knob and the tension needle



Blade tension table (you can read this in the outside of the flywheels access panel)

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4.3 SETTING OF THE BLADE GUIDES

When fitting a new blade the same width as the one being replaced it should only be necessary to check the guide setting. When fitting a blade of a different width or re setting the guides completely the following procedure should be followed.

1. Slacken main securing nut (1) and cap screw (2). Move both top and bottom guide assemblies and thrust rods back to their full extent.

2. Fit required blade and track the blade to the centre of the top band wheel, as described in section 4.1.

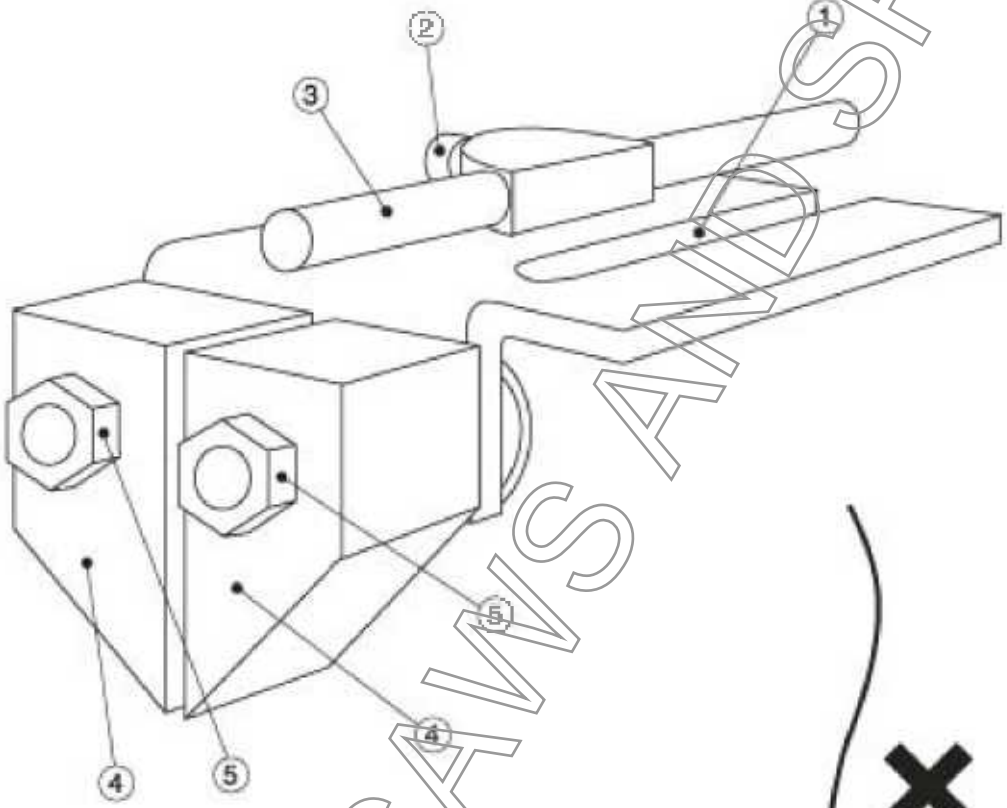
3. Bring forward the guide assemblies until bronze guide blocks cover at least 3/4 of the blade fig. 1 and re-tighten nut (1) top and bottom. Do not let the blade gullet enter the guide blocks.

4. Bring forward thrust rods (3) until 0.25mm from back of blade and re tighten cap screw (2).

5. Move a guide block lightly up to the blade making sure the blade is not disturbed from its natural line fig. 2 and it is parallel to the blade. Lock up nut (5).

6. Move corresponding guide block (4) to the blade with very light finger pressure and tighten nut. This should give a clearance of about 0.05mm (paper thin). This need not be a precise measurement and feeler gauges need not be used. When completed the blade should be able to be able to be pulled out of the guides with light pressure and have minimal twist.

7. Turn bandwheels by hand to make sure tracking and setting positions have not moved.



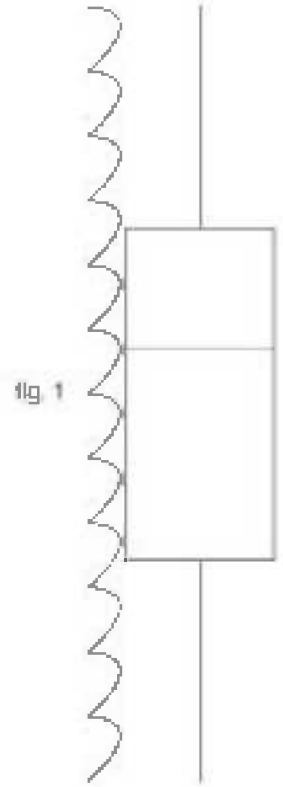


fig. 1

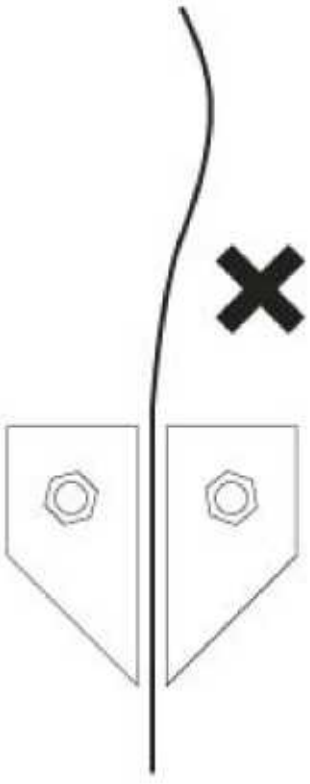


fig. 2

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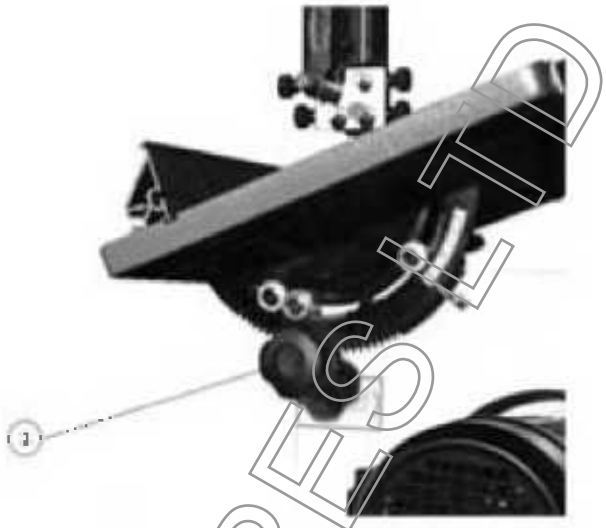
4.4 TABLE TILT

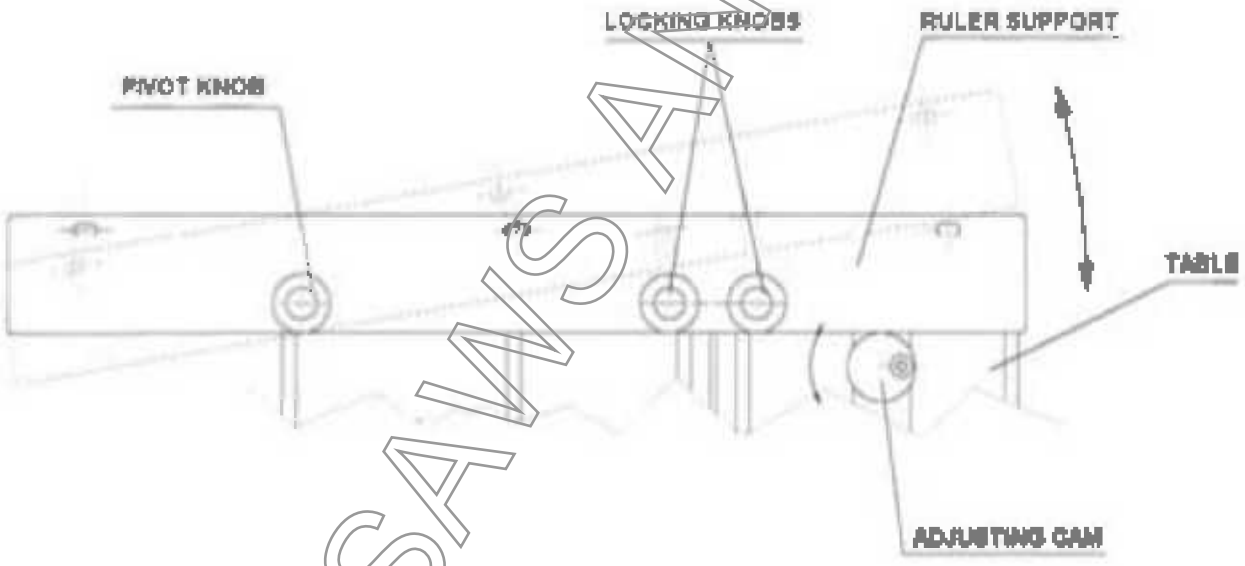
The table can be tilted to a max. of. 20°.
To tilt the table it is sufficient to loosen the lever that is found in front of the machine.
Turn the knob clockwise (ref.2) to obtain the inclination required. finally you must re-lock the lever.
A graduate scale indicates the inclination of the table.
When working with the table inclined. the rip fence should be positioned to right-hand side of the table to support the work-piece during cutting.



4.5 ACCURATE ADJUSTMENT OF THE RIP FENCE AND SCALE

The scale for the rip fence has an adjusting system that will give a very precise cut if adjusted correctly.
The ruler is assembled to the table with three knobs. One of these is a pivot
To obtain the most accurate parallel between the table and the ruler you have to adjust the cam stop that is under the table.
Adjustment is carried out by loosing the locking knobs and putting the ruler in the right position Then loosen the screw that holds the cam, then turn the cam until it reaches the rule in the correct position . Finally tighten all screws and knobs We recommend you the use of a suitable square).
The ruler on which the rip fence slides is graduated in millimetres and inches, and is possible to adjust it laterally so as to have the 0 positioned precisely in line with the blade.
This adjustment can be achieved by loosening the three screws that fix the ruler to the support.
When the ruler is in the right position re-tighten all the screws.

Adjustment of the parallel ruler



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5 Use

To start the machine push the black button on the switch.
To stop the machine you have to push the red button on the switch.
The machine is supplied with an electromagnetic brake that stops the machine in less time than 10 sec.

6 Advice and Recommendation for Safety

a) Machine out of order

For any repairs or adjustments to the machine, remove the electrical plug from the main supply.
For any malfunction of the machine, for any reason, remove the mains connections and place a visible sign on the machine.

b) Before operating

- Keep the surrounding floor space clean;
- Wear suitable clothing, not loose garments;
- Check that the blade is sharp, correctly tensioned, the correct width, and correctly positioned on the flywheels;
- Use support stands for long or wide material
- Switch on the aspirator.

c) During operation

Never clean the table with hands, use a brush or a piece of wood.
In case of an emergency, blade breakage or other hazards do not attempt to intervene before the flywheels have completely stopped.
When the work is completed lower the regulating protector to the level of the table, loosen the blade and leave a sign advising of this operation.
REMOVE THE ELECTRICAL CONNECTION PLUG.

d) During maintenance

- Place the machine out of order as indicated above;
- Use gloves to handle the blade;
- Periodically check the electrical grounding of the machine.

6.1 SAFETY DEVICES AND GUARDS

The upward portion of the blade is fully protected inside the machine column.
The down ward portion of the blade is protected by a fixed guard, integral with the blade-guide which is adjustable for height depending on the thickness of material to be cut.

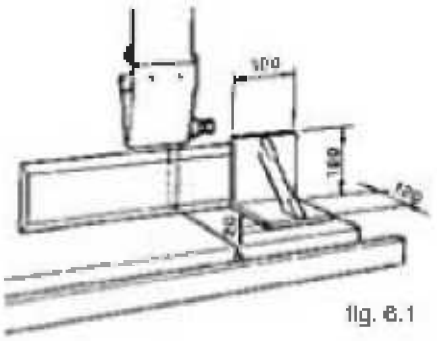

fig. 6.1

6.2 FACE CUTTING

FIG. 6.1 Square for a safe guiding of the piece to be machined during face cutting

CUTTING OF SHORT PIECES FIG. 6.2
Use pushing devices during cutting of short pieces.
The pushing device type A is recommended for narrow pieces.

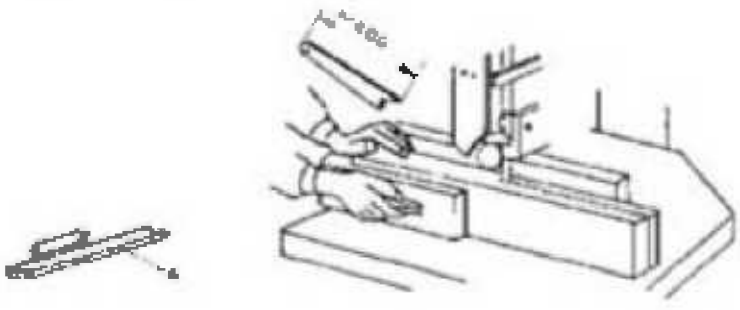

fig. 6.2

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6.3 CUTTING OF ROUND PIECES FIG. 6.3

Wedge rest to prevent rotation of round parts during cutting.

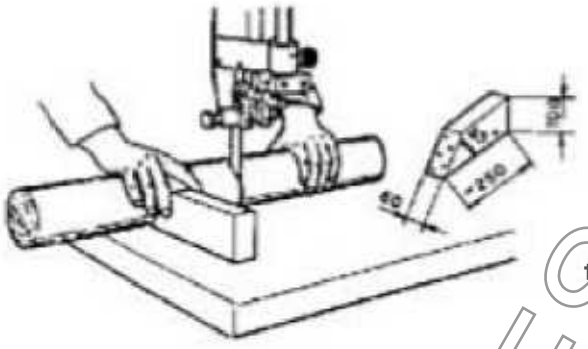

fig. 6.3

6.4 WEDGE CUTTING FIG.6.4

Pushing device for wedge cutting

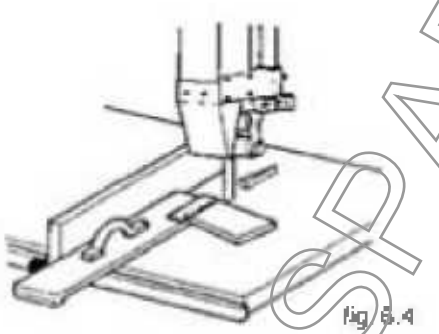

fig. 6.4

6.5 CIRCULAR CUTTING FIG. 6.5

Equipment for circular cutting

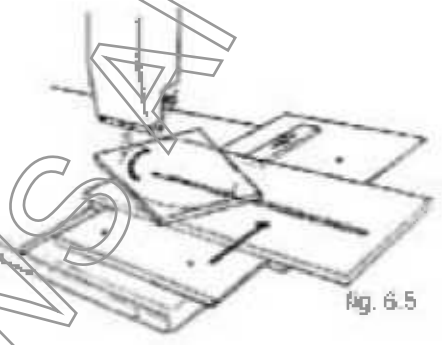

fig. 6.5

6.6 CUTTING OF WEDGE-SHAPED LENGTHS FIG. 6.6

Equipment for cutting wedge-shaped lengths

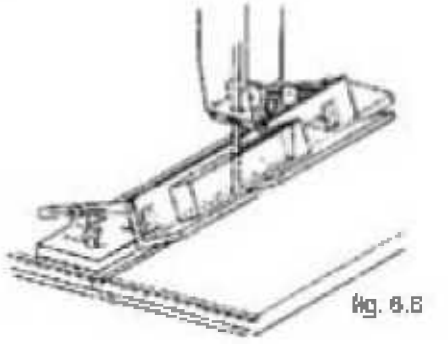

fig. 6.6

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7 Maintenance

BEFORE ANY INTERVENTION REMOVE THE ELECTRICAL PLUG FROM THE MAIN SUPPLY!

Periodically check the tightness of all the bolts and conditions of all types of protection.
Periodically clean the inside of the machine, using a vacuum cleaner to remove saw-dust.
The bearings do not require any lubrication or greasing.
Frequently check the cleanliness of the rubber flywheel covers, particularly in cases of cutting resinous materials, debris on the wheels can cause damage.
Replacing the flywheel rubbers: it is advisable that this be carried out by competent specialist or the manufacturer as the rubber covering is not only glued onto the flywheel surface but also grounded in a crown form.
It is absolutely forbidden to grind and shape the covering directly on the machine using gouges, files or abrasives.

7.1 TROUBLES-CAUSES AND SOLUTIONS

T Does not cut straight;
C The blade is not aligned, blunt or not set correctly
S Check the alignment, sharpen the blade or adjust the alignment of the parallel guide.

T The blade breaks at the weld;
C Overheating the blade during welding, cooling down the weld too quickly;
S Remove the weak area and repeat the welding operation.

T The blade moves backwards and forwards;
C The welding is not aligned;
S Repeat welding operation;

T The blade vibrates;
C The blade is too tight or too slack;
S Adjust the blade tension independently of the tension indicator.

7.2 RECOMMENDED BLADES

The number of teeth and type of material of the blade always depends upon type of material being cut.
As already stated previously, consult a specialist blade supplier.

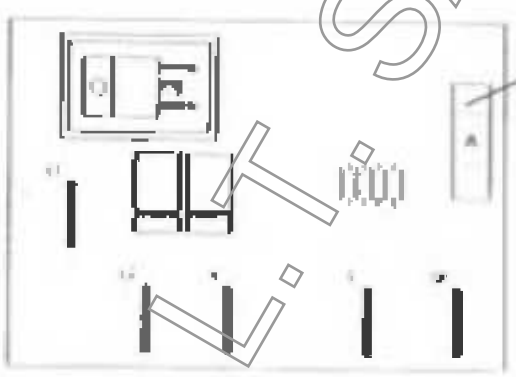
7.3 BRAKE REGULATION

The machine is supplied with an electronic brake, which ensures stopping blade within 10 seconds.
In the control box there is an electronic circuit with a regulating trimmer.
The timer regulates the brake time.
To regulate, use a screwdriver to turning the timer trimmer.
THIS OPERATION MUST BE CARRIED OUT BY COMPETENT PERSONNEL.

ATTENTION!

IN CASES OF POWER FAILURE THE BRAKING MOTOR DOES NOT FUNCTION.
THEREFORE BEFORE OPENING THE FLYWHEEL ACCESS PANELS WAIT FOR THE BLADE TO STOP COMPLETELY.

BRAKE TIME REGULATIUON TRIMMER



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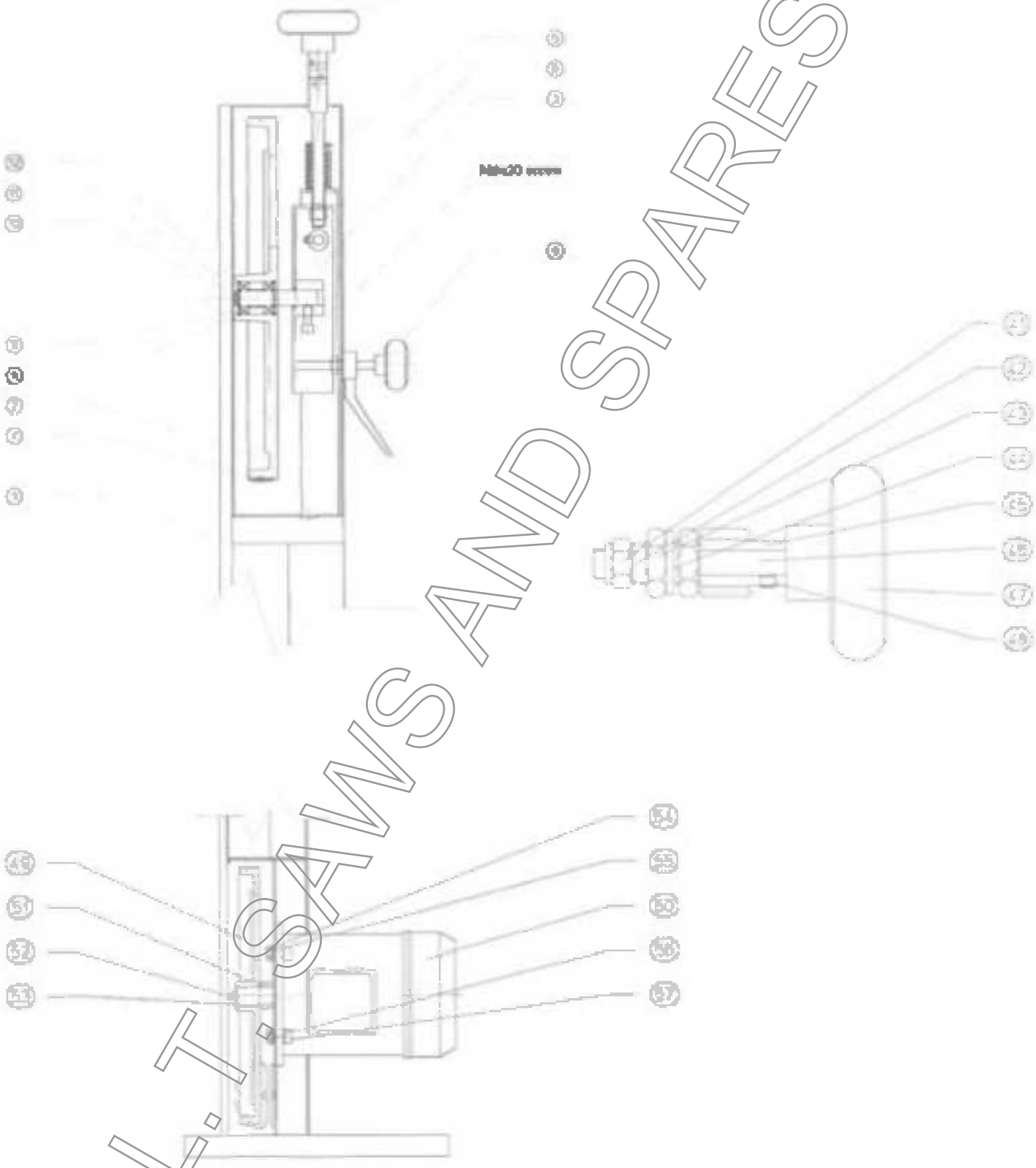
8 Spare Parts

8.1 ORDERING SPARE PARTS

In order to send quickly and exactly spare parts, we ask you to indicate clearly the following information:

- Model and serial number (you can see them on the metal identification plate);
- The number of reference shown on the following drawings;
- Quantity requested;
- Your address and telephone / fax number



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8.2 MAIN COMPONENTS LIST

	COMPONENT	CODE
1	Floor stand;	0361.00
2	Upper flywheel;	0362.00
3	Slide for tighten the blade;	0371.00
4	Blade tension knob;	0380.00
5	Tension spring;	0381.00
6	grub screw;	
7	Rubber ring;	0389.00
8	spacer;	
9	Bearing;	
10	Flywheel shaft;	0388.00
11	Shaft circlip;	
12	Hub circlip;	
13	Blade-driving knob;	0382.00
14	Table;	0391.00
15	Ruler;	0377.00
16	Ruler support;	0372.00
17	Half-cradle;	0387.00
18	Gear-cradle;	0386.00
19	Ruler support locking knob;	
20	Square;	0376.02
21	Table extension;	0387.00
22	ratchet handle;	
23	Square support;	0376.01
24	Control box;	0401.00
25	Control box support;	0402.00
26	Blade-guide height adjustment device locking knob;	0384.00
27	Blade-guide height adjustment device;	0385.00
28	Blade protector;	0368.00
29	Safety Micro;	
30	Micro protector;	0403.00
31	Flywheels access panel hinge;	0379.00
32	Flywheels access panel locking knob;	0366.00
33	Needle;	0398.00
34	Adjusting knob;	
35	Thrust rolling bearing;	
36	Blade-guide body;	0388.04
37	Thrust rolling bearing;	
38	Thrust shaft;	0396.03
39	Blade-guide height adjustment device connecting shaft;	0396.01
40	Eccentric shaft;	0396.02
41	nylock nut;	
42	Gear support;	0390.00
43	nut;	
44	safety washer;	
45	Gear	0369.00
46	captive shaft;	0381.00
47	knob;	0382.00
48	grub screw.	
49	Lower flywheel;	0363.00
50	Motor;	0376.00
51	Spacer;	0406.00
52	cap screw	
53	Washer;	
54	Nut;	
55	Washer;	
56	safety washer;	
57	screw.	

Others:

58	Flywheel cleaning brush group:	0404.00

- brush body;
- brush support;
- screw;
- nut;
- washers.

59	Slide-guide shaft ;	0408.00
60	Eccentric slide-guide shaft;	0407.00
61	screw.	

A.L.T. SAWS AND SPARES LTD

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